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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,489	11/14/2005	Andrew Samways	037141.55741US	8448

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CROWELL & MORING LLP
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EXAMINER

COOLEY, CHARLES E

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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09/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/556,489	Applicant(s) SAMWAYS ET AL.	
	Examiner Charles E. Cooley	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 17 and 18 is/are allowed.
- 6) ☒ Claim(s) 2-7, 14-16, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL OFFICE ACTION

- 1. This application remains assigned to Technology Center 1700, Art Unit 1797 and the following will apply for this application:**

Please direct all written correspondence with the correct application serial number for this application to **Art Unit 1797**.

Telephone inquiries regarding this application should be directed to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 or to the Examiner at (571) 272-1139. All official facsimiles should be transmitted to the centralized fax receiving number 571-273-8300.

Election/Restriction Requirement

2. Applicant's election without traverse of Group I in the reply filed on 6 MAR 2009 is acknowledged. Nonelected claims 9-13 have been cancelled.

Priority

3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d). All of the CERTIFIED copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

Specification

4. The substitute abstract is approved.

Claim Rejections - 35 USC § 103

5. The terms used in this respect are given their broadest reasonable interpretation in their ordinary usage in context as they would be understood by one of ordinary skill in the art, in light of the written description in the specification, including the drawings, without reading into the claim any disclosed limitation or particular embodiment. See, e.g., *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000); *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989). The Examiner interprets claims as broadly as reasonable in view of the specification, but does not read limitations from the specification into a claim. *Elekta Instr. S.A.v.O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000).

6. To determine whether subject matter would have been obvious, "the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

The Supreme Court has noted:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740-41 (2007). "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." (Id. at 1742).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 2-7, 14-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/055207 A1 in view of Wright (US 1,277,676), Borgstrom et al. (US 6,533,713 B1), Downey (US 3,231,182), OR Downey (US 3,235,174).**

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10. WO 02/055207 discloses the recited subject matter substantially a claimed including a centrifuge with a rotor (at least in Fig. 2) comprising a walled contaminant separation and containment vessel 230 having a longitudinally extending rotation axis, an impervious outer side wall 134 extending about and along the rotation axis spaced radially therefrom and at least one end wall extending from the side wall towards the rotation axis, an outlet passage 142, leading externally of the vessel, disposed radially inwardly with respect to the outer side wall, said walls defining radially inwardly from the outer side wall an annular contaminant separation and containment zone 140 and the outlet passage defining the radial boundary of the zone, an inlet 250, arranged to receive liquid to be cleaned and convey it to the contaminant separation and containment zone at a rate less than liquid can be passed by the outlet passage, a mounting arrangement/hub 122 for mounting the rotor for rotation of the vessel about the longitudinal rotation axis, and a fluid motor impeller 172 disposed to receive a jet of drive fluid thereagainst and responsive to drive fluid impingement to rotate the rotor about said longitudinal rotation axis, said inlet further comprising a liquid inlet region, defined about and along the rotation axis by a divider wall 252 disposed radially between the outlet passage and the rotation axis, having a liquid inlet end, a transfer passage 264, spaced from the inlet end, permitting liquid flow between the inlet region and contaminant separation and containment zone; a collection face 258 of said divider wall facing inwardly towards the rotation axis; the fluid motor impeller comprises a plurality of motor impeller vanes 174 or 474 disposed at or adjacent the inlet end of the inlet, each upstanding with respect to said dividing wall collection face; the motor

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impeller vanes 474 extend about the rotation axis and along the divider wall from said inlet end towards said transfer passage in the same directional sense as the collection impeller vanes; the motor impeller vanes 474 each have a primary face facing in a direction towards the transfer passage and are arranged to receive drive fluid injected into the inlet region on said primary face and deflect spent fluid in a direction between said collection impeller vanes towards the transfer passage.

11. With regard to claims 19-20, WO 02/055207 discloses a centrifugal separator comprising a housing 112 including a mounting arrangement 122 to support a rotor including a liquid separation and containment vessel for rotation about a rotation axis, a drainage 114 to direct liquid exiting the vessel away from the rotor, a fluid motor turbine including a drive fluid nozzle 176 operable to direct a stream of drive fluid to motor impeller vanes, and a vessel supply 118 operable to direct liquid to be cleaned to the rotor vessel; a liquid nozzle 176 operable to direct a free jet of said liquid to the inlet end of the inlet.

12. WO 02/055207 does not disclose the recited collection impeller with vanes extending along a helical path located at the inlet. The patents to Wright (US 1,277,676), Borgstrom et al. (US 6,533,713 B1), Downey (US 3,231,182), OR Downey (US 3,235,174) each disclose a centrifuge having an inlet region with a collection impeller with vanes extending along a helical path within the recited pitch angle range: (Wright: impeller e; Borgstrom et al.: impeller 17, 18; Downey '182: impeller 80 or 83; and Downey '174: impeller 79 or 81). It would have been obvious and mere common sense to one having ordinary skill in the art, at the time applicant's invention was made,

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to have provided the centrifuge of WO '207 with a collection impeller with vanes extending along a helical path located at the inlet as taught by any of Wright, Borgstrom et al., Downey '182, or Downey '174 for the purposes of increasing the amount of liquid that can be processed by the centrifuge and to accelerate or propel the liquid passing through the inlet (Wright at p. 1, lines 25-36 and p. 2, lines 25-27 and lines 43-53); to entrain the liquid and urge the liquid into the inlet region (Borgstrom et al. at col. 4, lines 4-52); or to impel the liquid in the inlet region (Downey '182 at col. 6, lines 70-75 and Downey '174 at col. 5, lines 25-41).

13. Furthermore, the product-by-process limitations (i.e., the manner in which the rotor is formed or molded – claims 7 and 16) do not impart patentability to the claims per MPEP 2113.

Allowable Subject Matter

14. Claims 8, 17, and 18 are allowed.

Response to Amendment

15. Applicant's arguments filed 9 JUL 2009 have been fully considered but they are not persuasive.

Applicant remarks that prior art was not applied against claims 19-20, however, these claims were actually addressed in the last office action (see the last line of p. 7 and lines 1-7 of p. 8). Unfortunately, these claims were not included in the list of

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rejected claims due to a typographical error. Accordingly, the rejection is repeated with the claims clearly identified as rejected (note section (11) above).

With regard to Wright (US 1,277,676), Borgstrom et al. (US 6,533,713 B1), Downey (US 3,231,182), or Downey (US 3,235,174), claims 2 and 19 are interpreted as merely reciting a helical vane, which helical vanes in a centrifuge are clearly disclosed by these references. The term "collection" is not deemed to impart any peculiar structure to define over the helical vanes of Wright, Borgstrom et al., Downey (US 3,231,182), or Downey (US 3,235,174). Applicant comments on the pressurization of the fluid and the direction of movement of the fluid (i.e., axially v. radially) yet such subject matter is lacking from these claims and the examiner wonders what structure these operational and functional aspects imparts to the pending apparatus claims. Nevertheless, the examiner would assert that the helical paths defined in any of Wright, Borgstrom et al., Downey '182, or Downey '174 would indeed mandate both a radial and axial flow to the fluid being processed in the centrifuge since the overall flow of fluid passing through the helical path is axial while impact between the fluid and the vanes defining the helical path would direct the fluid radially outward while being moved along the helical path.

Applicant's conclusion that the shape of the screws of the prior art renders the combination "impossible" is considered to be speculative attorney's argument unsupported by objective technical evidence on the issue. Arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ

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716, 718 (CCPA 1965); *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited prior art discloses

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Cooley in Art Unit 1797 whose telephone number is (571) 272-1139. The examiner can normally be reached on Mon-Fri.. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Charles E. Cooley/

Charles E. Cooley
Primary Examiner
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18 September 2009